AUTHOR: Bogdanov, Yu. S. 20-120-5-2/67

TITLE: Some Marks for the Absence of Closed Trajectories (Nekotoryye priznaki otsutstviya zamknutykh trayektoriy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 5, pp 939-940 (USSR)

ABSTRACT: Let X be an open subset of the real two-dimensional Euclidean space E^2; $x \equiv (x_1, x_2) \in X$; $\|x\| \equiv (x_1^2 + x_2^2)^{1/2}$; let $p(x)$ be a real two times differentiable vector function with the components $p_1(x)$, $p_2(x)$ defined in X; let V be a bounded subset of X with the diameter h; let G be a subset of X. In X, $t \in (-\infty, \infty)$ let the differential equation D be considered

$$D: \frac{dx}{dt} = p(x).$$

Let X_D be the set of the singular points of D and let $G' \equiv G \setminus X_D$. Furthermore let

$$k(x) \equiv p_1^2(x)\frac{\partial p_2(x)}{\partial x_1} + p_1(x)p_2(x)\left(\frac{\partial p_2(x)}{\partial x_2} - \frac{\partial p_1(x)}{\partial x_1}\right) - p_2^2(x)\frac{\partial p_1(x)}{\partial x_2}; \quad k(x,t) \equiv |k(x)| - t\|p\|^3;$$

$$m(x) \equiv p(x)\frac{\partial \frac{k(x)}{\|p(x)\|^3}}{\partial x} \text{ for } x \in G'; \quad \Delta(x) \equiv \left[0, \frac{\|p(x)\|^2}{k(x)}\right] \text{for } k(x) \neq 0$$

Card 1/3

and $\Delta(x) \equiv (-\infty, \infty)$ for $k(x) = 0$; $\xi(G) \equiv \bigcup_{x \in G'} \bigcup_{t \in \Delta x} (x+t)(-p_2(x), p_1(x))$; $\eta(G) \equiv \bigcup_{x \in G'} \bigcup_{t \in (-\infty, \infty)} (x+t)(-p_2(x), p_1(x))$. Furthermore let γ be a closed Jordan curve and I_γ be the interior of the domain bounded by it; $V \subset I_\gamma$.

Theorem: If $k(x, \frac{2}{h}) > 0$ for all $x \in G'$, then D possesses no solution which entirely runs in G and includes V.

Theorem: If $k(x) \not\equiv 0$ for all $x \in G'$ and $\xi(G) \cap V \not\equiv V$, then D possesses no solution which entirely runs in G and includes V.

Theorem: If $\eta(G) \cap V \not\equiv V$, then D possesses no solution which entirely runs in G and includes V.

Theorem: If $k(x, \frac{2}{h}) < 0$ for all $x \in V$, then D possesses no solution which entirely runs in V.

Theorem: If $m(x) \not\equiv 0$ for all $x \in G'$, then D possesses no solution which entirely runs in G'.

Some Marks for the Absence of Closed Trajectories 20-120-5-2/67

The theorems are repeated in a geometric form and the geometric properties are explained from which there follow the theorems. There is 1 Soviet reference.

ASSOCIATION: Leningradskoye otdeleniye matematicheskogo instituta imeni V.A. Steklova Akademii nauk SSSR (Leningrad Section of the Mathematical Institute imeni V.A.Steklov of the Academy of Sciences of the USSR)

PRESENTED: December 13, 1957, by V.I.Smirnov, Academician

SUBMITTED: December 10, 1957

1. Topology 2. Mathematics

Card 3/3

16(1)

AUTHORS: Bogdanov, Yu.S., Chebotarev, G.N. SOV/140-59-4-5/26

TITLE: On Matrices Commutating With Their Derivative

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Matematika, 1959, Nr 4,pp 27 - 37 (USSR)

ABSTRACT: A matrix is called conservative, if it maintains the Jordan normal form on an interval, i.e. if it possesses the same Segre characteristic in every interval point. The authors consider conservative matrices A(t) which commutate with their derivative A'(t).
Theorem : Let the matrix A(t) be everywhere differentiable or absolutely continuous, conservative and commutate with its derivative on the interval (a,b); let the elementary divisors of A(t) be relative prime. Then A(t) is functional-commutative (i.e. their values commutate with each other in two arbitrary interval points).
A second theorem contains the statement on conservative everywhere differentiable matrices, the characteristic polynomial of which is decomposed into two relatively prime factors. Several examples are discussed.

Card 1/2

On Matrices Commutating With Their Derivative SOV/140-59-4-5/26

The authors mention V.V. Morozov and N.P. Yerugin.
There are 10 references, 6 of which are Soviet and 4 Italian.

ASSOCIATION: LOMI imeni V.A. Steklova AN SSSR (LOMI imeni V.A. Steklov AS USSR)
Kazanskiy aviatsionnyy institut (Kazan' Aviation Institute)

SUBMITTED: August 12, 1958

Card 2/2

16(1) 05356
AUTHOR: Bogdanov, Yu.S. (Minsk) SOV/39-49-2-5/5

TITLE: Norms of Lyapunov in Linear Spaces

PERIODICAL: Matematicheskiy sbornik, 1959, Vol 49, Nr 2, pp 225-231 (USSR)

ABSTRACT: The author gives proofs for the results announced in [Ref 4] concerning the generalization of the notions "characteristic number" and "normal system of differential equations" of Lyapunov [Ref 1].
There are 5 references, 4 of which are Soviet, and 1 German.

SUBMITTED: January 25, 1958

Card 1/1

~~16(1)~~ 16 2-129

AUTHOR: Bogdanov,Yu.S.

SOV/20-129-4-1/68

TITLE: On the Structure of the Solution to a Certain Linear Differential System

PERIODICAL: Doklady Akademii nauk SSSR,1959,Vol 129,Nr 4,pp 719-721 (USSR)

ABSTRACT: Let

(1) $x' = qx - xp$

be a linear differential equation in matrix-form; let $x' = \frac{dx}{dt}$, $p = p(t)$, $q = q(t)$ be real $n \times n$ matrices defined for all $t \in (-\infty, \infty)$ and summable on every finite interval. Every real absolutely continuous $n \times n$ matrix $x = \xi(t)$ satisfying (1) for almost all t is denoted as a solution of (1).
A fundamental solution $\xi(t)$ is called normalized in $t = t_0$ if $\xi_1(t_0)$ is an $n \times n$ unit matrix.

Theorem 1: Let Φ be a fundamental solution of

(2) $x' = p(t+1)x - xp(t)$

normalized in 0. Let ξ_0 be a fundamental solution of

(3) $x' = px$

normalized in $t = 0$. Then for an arbitrary natural k every

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On the Structure of the Solution to a Certain Linear Differential System

solution ξ of (3) can be represented in the form

(4) $\xi(t+k)=\sigma(t+k-1)\sigma(t+k-2)\ldots\sigma(t+1)\sigma(t)\xi_0(t)\xi_0^k(1)\xi(0)$.

Theorem 2: Let p and ξ have the above meaning. Besides let (2) have a periodic fundamental solution. Then

(5) $\xi(t) = e^{t\varphi(t)}\eta(t)e^{t\delta}\xi(0)$

for all $t\in(-\infty,\infty)$, where φ, η are continuous periodic $n\times n$ matrices and γ is a constant matrix (φ, η, γ do not depend on ξ). The author mentions N.P.Yerugin, and O.I.Samuel'.
There are 6 references, 4 of which are Soviet, 1 American, and 1 Czechoslovak.

ASSOCIATION: Belorusskiy gosudarstvennyy universitet (Belorussian State University)

PRESENTED: July 16, 1959, by V.I.Smirnov, Academician.

SUBMITTED: July 10, 1959

Card 2/2

BOGDANOV, Yu. S., Cand Phys-Math Sci -- (diss) "Characteristic Numbers of Lineal Differential Systems." Minsk, 1960, 8 pp, (Academy of Sciences BelSSR; Department of Phs-Math, Chem, and Geol Sci) 180 Copies, no price given, (KL, 21-60, 117)

16.3400

77800
SOV/42-15-1-7/27

AUTHOR: Bogdanov, Yu. S.

TITLE: On the Existence of an Approximating Sequence for a Regular Linear Differential System

PERIODICAL: Uspekhi matematicheskikh nauk, 1960, Vol 15, Nr 1, pp 177-179 (USSR)

ABSTRACT: Let p be a given real (n x n)-matrix, piecewise continuous and bounded for the real argument $\tau \geqslant 0$; k = 1,2,....; m denotes k or the absence of the index; T is an unboundedly increasing sequence of positive numbers t_k; p_k, a matrix function coinciding with p on the interval $[0, t_k)$ and periodically continued outside; S_m, linear differential system $\frac{dx}{d\tau} = p_m x$; λ_m, set of characteristic exponents of the normal system of solutions of S_m, ordered in increasing order and treated

Card 1/ 2

On the Existence of an Approximating Sequence for a Regular Linear Differential System

77800
SOV/42-15-1-7/27

as a vector. The sequence T is called approximating if $\lambda_k \rightarrow \lambda$ for $k \rightarrow \infty$. K. P. Persidskiy asserted that if S is a regular system, then any arbitrary sequence T is approximating. R. E. Vinograd showed the inconsistency of this by constructing examples; further, he showed that there exist T which are not approximating. The author then proves the following basic results: (1) There exist regular systems for which no sequence T is approximating. (2) Any arbitrary two-dimensional system S under an orthogonal substitution of variables, whose coefficients depend only on the argument of the system and the upper bound of the moduli of the elements of p, can be transformed into a form for which an approximating sequence T is known to exist. It is also noted that for $n > 2$ an approximating sequence T necessarily exists. There are 4 Soviet references.

SUBMITTED: August 28, 1958
Card 2/2

BOGDANOV, Yu.S.

The simplest incomplete differential equation. Dokl. AN BSSR 5 no.10:427-429 O '61. (MIRA 15:3)

1. Institut matematiki i vychislitel'noy tekhniki AN BSSR. Predstavleno akademikom AN BSSR N.P.Yeruginym.
(Differential equations)

BOGDANOV, Yu.S.

Converting a variable matrix to the canonical form. Dokl. AN BSSR 7 no.3:152-154 Mr '63. (MIRA 16:6)

1. Belorusskiy gosudarstvennyy universitet imeni V.I.Lenina. Predstavleno akademikom AN BSSR N.P.Yeruginym.
(Matrix mechanics)

BOGDANOV, Yu.S.

A function that takes on all intermediate values. Dokl. AN BSSR 6 no.12:755-756 D '62. (MIRA 16:9)

1. Belorusskiy gosudarstvennyy universitet imeni Lenina. Predstavleno akademikom AN BSSR N.P.Yeruginym.

L 8519-65 EWT(d)/EWT(l)/EWA(m)-2 IJP(c)/ASD(d)/AFMDC/ASD(f)/RAEM(t)

ACCESSION NR: AP4045087 S/0020/64/158/001/0009/0012

AUTHOR: Bogdanov, Yu. S.

TITLE: Use of generalized characteristic numbers for the investigation of the stability of the quiescent point

SOURCE: AN SSSR. Doklady*, v. 158, no. 1, 1964, 9-12

TOPIC TAGS: stability criterion, Lyapunov stability, stability theory

ABSTRACT: Two characteristic numbers are defined: the small vd number

$$\overline{\Omega}\ \mathrm{vd}\ x \overset{\mathrm{def}}{=} \max\left\{\overline{\lim_{\tau\to+\infty}}\ \frac{1}{\tau}D(x,\tau,\tau_0),\ -\underline{\lim_{\tau\to-\infty}}\ \frac{1}{\tau}D(x,-\tau,\tau_0)\right\}$$

and the vd number

$$\overline{\Omega}\ \mathrm{vd}\ x \overset{\mathrm{def}}{=} \overline{\lim_{\tau\to+\infty}}\ \frac{1}{\tau}\sup_{-\infty<\tau_0<+\infty} D(x,\tau,\tau_0)$$

Card 1/3

where

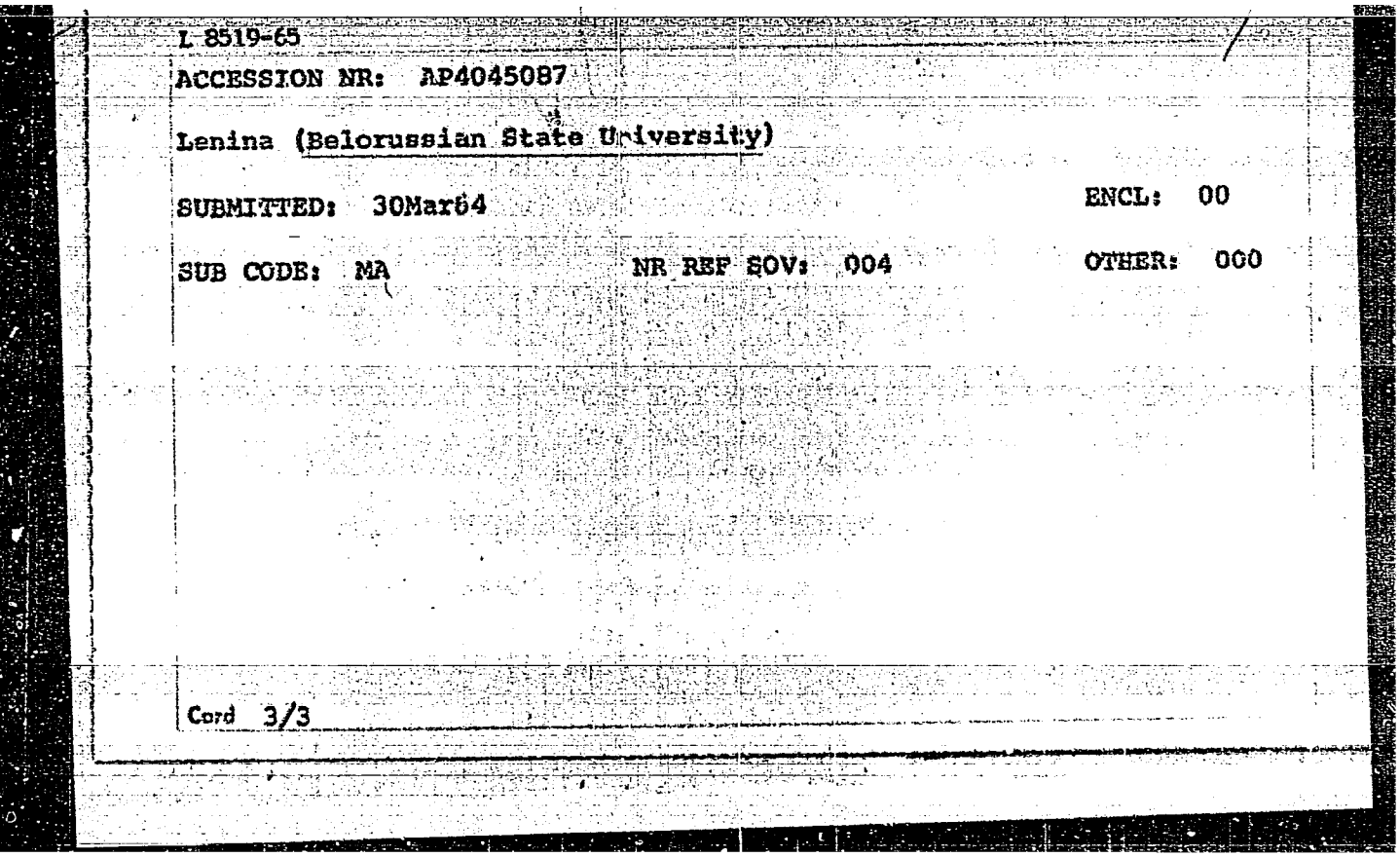
$$D(x, \tau, \tau_0) \overset{def}{=} d(v[x(\tau_0 + \tau)], v[x(\tau_0)]), \quad \tau_0 \in (-\infty, +\infty), \tau \in (0, +\infty)$$

d being defined for all positive values of the arguments and taking on all possible real values, and v having certain specified properties. The author considers a domain in a v-dimensional real Euclidean space containing the origin O_0, which is treated an unstable quiescent point (in the sense of Lyapunov) for a differential system

$$dx/dt = f(x), \quad x \in S, \qquad (1)$$

with right side f(x) satisfying the local Lipschitz condition on the domain S and vanishing at O_0. Sufficient and necessary stability and instability conditions are proved with the aid of the generalized characteristic numbers. This report was presented by V. I. Smirnov. Orig. art. has: 12 formulas.

ASSOCIATION: Belorusskiy gosudarstvenny*y universitet im. V. I.



L 8519-65

ACCESSION NR: AP4045087

Lenina (Belorussian State University)

SUBMITTED: 30Mar64 ENCL: 00

SUB CODE: MA NR REF SOV: 004 OTHER: 000

Card 3/3

BOGDANOV, Yu.S.

Asymptotically equivalent linear differential systems. Diff. urav. 1 no.6:707-716 Je '65. (MIRA 18:7)

1. Belorusskiy gosudarstvennyy universitet imeni V.I. Lenina.

BOGDANOV, Yu.S.

Generalized characteristic numbers of nonautonomous systems.
Dif. urav. 1 no.9:1140-1148 S '65. (MIRA 18:10)

1. Belorusskiy gosudarstvennyy universitet imeni Lenina.

L 44174-66 EWT(d) IJP(c)

ACC NR: AP6010536 SOURCE CODE: UR/0376/66/002/003/0309/0313

AUTHOR: Bogdanov, Yu. S. 25

ORG: Belorussian State University (Belorusskiy gosudarstvennyy universitet) B

TITLE: On the occurrence of asymptotic stability with the aid of vd numbers

SOURCE: Differentsial'nyye uravneniya, v. 2, no. 3, 1966, 309-313

TOPIC TAGS: asymptotic solution, differential equation, Lipschitz condition, system analysis, Euclidean space

ABSTRACT: A topological sphere Σ is defined in n-dimensional real Euclidean space $E_0 = \{\xi\}$. This sphere contains the coordinate origin 0_0; an n-dimensional vector function $f(\xi)$ is defined which satisfies the Lipshits conditions on Σ such that $f(0_0) = 0_0$. The dormancy point $x = 0_0$ of the system of equations

$$dx/d\tau = f(x) \quad (1)$$

is studied with respect to stability in the supposition that all solutions can extend without limit on both sides. Subject to other problem conditions which are defined and discussed, the following necessary condition for asymptotic stability can be established: If 0_0 is asymptotically stable with respect to the system 1, for which Σ is the domain of attraction of 0_0, then for any function v of the type Π there exists a function d with the properties

$$d_1)\ d(\gamma_2, \gamma_1) = \overline{d}(\gamma_1, \gamma_2),$$

Card 1/2 UDC: 517.917

L 44174-66
ACC NR: AP6010536

$d_1)\ d(\gamma_2, \gamma) > d(\gamma_1, \gamma),$
$d_2)\ d(\gamma_2, \gamma_3) + d(\gamma_3, \gamma_1) > d(\gamma_2, \gamma_1),$
$d_3)\ \bigcup_{\gamma} [d(\gamma, \gamma_1)] = (+\infty, -\infty),$

such that small vd numbers of all nonzero solutions of (1) are substantially negative. A second necessary condition is: if 0_0 is asymptotically stable with respect to (1), where S_{0_0} is the domain of attraction of 0_0, then for any d with the properties d_{1-4} and any v of type Π there exists a $\bar{v}$ of type Π, the combination of sets of a level corresponding with the combination of sets of the level v, such that $\int_{\Omega} \bar{v} dx_t \leqslant -1$ for any nonzero solution of (1). Orig. art. has: 7 equations.

SUB CODE: 12/ SUBM DATE: 24Nov65/ ORIG REF: 003

LS
Card 2/2

FAYNSHTEYN, V.F., inzh.; BOGDANOV, Yu.V., inzh.

Explosionproof measurements by wire gauges. Sbor. KuzNIUI no.10: 231-235 '64. (MIRA 18:9)

KOZLOVSKIY, P.R., inzh.; ABRAMTSEV, Ye.P., inzh.; BOGDANOV, Yu.V., inzh.

Automatic control of a branched conveying line at the "Tomusinskaia-1-2" mine. Sbor. KuzNIUI no.10:278-284 '64. (MIRA 18:9)

KOZLOVSKIY, P.R., inzh.; BOGDANOV, Yu.V., inzh.; BELOKRYLOV, V.V., inzh.

Automatic control of conveyors preventing the breakdown of their operating members. Sbor. KuzNIUI no.10:292-300 '64. (MIRA 18:9)

BOGDANOV, Yu.V., inzh.

Automatic control of cutter-loaders having a selective cutter.
Sbor. KuzNIUI no.10:177-181 '64. (MIRA 18:9)

BOGDANOV, Yu.V., inzh.; MOLCHANOV, V.N., inzh.

Program control of cutter loaders having a selective actuating mechanism. Sbor. KuzNIUI no.10:182-201 '64. (MIRA 18:9)

L 8333-66 EEC(k)-2/EWA(h)/EWT(l)

ACC NR: AP5025763 SOURCE CODE: UR/0286/65/000/018/0130/0131

AUTHORS: Bogdanov, Yu. V.; Kislova, V. F.; Molchanov, V. N.; Abramtsev, Ye. P.; Shishorin, V. A.; Popov, F. I.; Nikiforov, A. F.

30
B

ORG: none

TITLE: A discrete contactless phase-sensitive pickup. Class 74, No. 174962 [announced by Kuznetsk Scientific Research Coal Institute (Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 130-131

TOPIC TAGS: phase meter, magnetic circuit, magnet

ABSTRACT: This Author Certificate presents a discrete contactless phase-sensitive pickup consisting of a fixed toothed magnetic circuit with control windings and a moving magnetic circuit without windings. In order to simplify the pickup and to obtain an unambiguous signal pickup, two readout windings are situated on two external teeth of the fixed magnetic circuit (see Fig. 1). The moving magnetic circuit, which is connected to the moving object, is equipped with one readout tooth.

Card 1/2 UDC: 621.083.8:62—503.83

L 8333-66

ACC NR: AP5025763

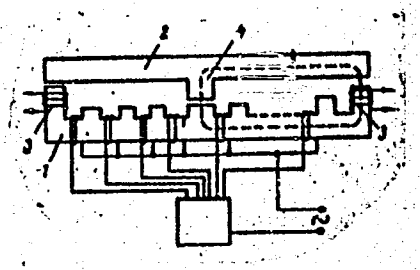


Fig. 1. 1 - Fixed toothed magnetic circuit;
2 - moving magnetic circuit;
3 - readout windings;
4 - readout tooth.

Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 07Jul64

jw

Card 2/2

BOGDANOV, Yu.V.

Cubanite from the Pitkyaranta deposits. Mat. VSEGEI. Petr. i min. no.1:176-177 '55. (MLRA 8:6)
(Pitkyaranta--Cubanite)

SOV/112-58-2-2305

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 2, p 83 (USSR)

AUTHOR: Faynshteyn, V. F., and Bogdanov, Yu. V.

TITLE: Remote-Automatic Control of Scraper Installations at Mining Coal-Storage Yards (Distantsionno-avtomatizirovannoye upravleniye skrepernymi ustanovkami na shakhtnykh ugol'nykh skladakh)

PERIODICAL: V sb.: Avtomatizatsiya v ugol'n. prom-sti, M., Ugletekhizdat, 1956, pp 565-572

ABSTRACT: A description is given of the remote control at an installation being realized at the coal-storage yard of the Mine imeni Stalin. The scraper installation comprises 4 scraper winches driven by phase-wound, 200-kw, 6-kv motors, and 1 scraper winch driven by low-voltage phase-rotor, 90-kw motors. The simplified diagram suggested provides for the control of the scraper winches by 2 operators, and ensures the following: remote on-and-off switching of electric motors and drum-changing brakes; over-current and undervoltage protective systems; a bearing overheating protective system, and

Card 1/2

Remote-Automatic Control of Scraper Installations at Mining Coal-Storage Yards

protection against head-column block destruction. The functioning of the scheme is explained in detail; the construction of the protective system is described, and brief suggestions as to the placement and mounting of the equipment are given. It is reported that the adoption of the remote control laid off 15 of the coal-yard workers.

A.V.S.

BOGDANOV, Yu.V.

Some data on the metamorphism of pyrites in Karelian deposits. (MIRA 11:7)
Met. VSEGEI no. 21:114-122 '57.
(Karelia--Pyrites)

DOMAREV, V.S.; BOGDANOV, Yu.V.

Zoning in the mineralization of copper stones in the Udokan deposit. Geol.rud.mestorozh. no.1:25-34 Ja-F '59. (MIRA 12:5)

1. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut, Leningrad.
(Udokan Range--Copper ores)

BILIBINA, T.V.; BOGDANOV, Yu.V.

Gold prospects in the Mugodzhar region. Geol. rud. mestorozh. no.5: 104-111 S-O '59. (MIRA 13:2)

1.Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut, Leningrad.
(Mugodzhar region--Gold ores)

BILIBINA, T.V.; BOGDANOV, Yu.V.; OZHINSKIY, I.S.

Formation of uranium ores of the sedimentary-metamorphic type in pre-Cambrian marbles and rocks of the skarn type. Zap.Vses.min.ob-va 88 no.4:369-376 '59. (MIRA 12:11)

1. Deystvitel'nyye chleny Vsesoyuznogo mineralogicheskogo obshchestva. (Uranium ores)

BOGDANOV, Yu.V.

Pyrite deposits of the western Mugodzhar Hills. Mat.VSEGEI.Ob.ser. no.28:149-166 '60. (MIRA 14:6)
(Mugodzhar Hills—Pyrites)

FAYNSHTEYN, Veniamin Fedorovich; BOGDANOV, Yuriy Vasil'yevich; ORLOV, Vyacheslav Prokhorovich; BUROV, Anatoliy Il'ich; KORABLEV, A.A., otv. red.; FROLOVA, Ye.I., red. izd-va; LOMILINA, L.N., tekhn. red.; MINSKER, L.I., tekhn. red.

[Sparkproof gauges and spark- and blastproof strain and their use in the coal industry] Iskrobezopasnye i iskrovzryvobezopasnye tenzometricheskie pribory i ikh primenenie v ugol'noi promyshlennosti. Moskva, Gosgortekhizdat, 1961. 86 p. (MIRA 15:8)

(Coal mines and mining—Electric equipment)
(Strain gauges)

BOGDANOV, Yu.V.

Conditions governing the formation of the Dzhangana copper deposit in the Mugodzhar Hills. Trudy VSEGEI 60:31-36 '61. (MIRA 15:3)
(Mugodzhar Hills--Copper ores)

BOGDANOV, Yu.V.

Geology and conditions of formation of cuprous sandstone deposits in the region of the Udokan Range (Eastern Siberia). Dokl.AN SSSR 145 no.6:1338-1340 Ag '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut. Predstavleno akademikom D.V.Nalivkinym.
(Udokan Range region—Copper ores)

BOGDANOV, Yu.V.

Geology and regularities in the location of cuprous sandstones in the area of Udokan Range. Zakonom. razm. polezn. iskop. 5:345-352 '62. (MIRA 15:12)

1. Vsesoyuznyy geologicheskiy institut Ministerstva geologii i okhrany nedr SSSR.
(Udokan Range—Copper ores)

BOGDANOV, Yu. V.; KUTYREV, E. L.

"Conditions of the Formation of Alpine-type Veins in the Copper-bearing Beds of the Udokan Deposit - North-Eastern Transbaikalia."

report presented at the Symp on Post Magmatic Ore Deposits, Prague, 16-21 Sep 63.

BOGDANOV, Yu.V.

Contact metamorphism of copper sandstones in the Udokan deposit. Zap. Vses. min. ob-va 92 no.5:535-546 '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (VSEGEI), Leningrad.

BOGDANOV, Yu.V.; KOCHIN, G.G.

Geology and characteristics of the distribution of gold-copper-complex metal deposits in the northeastern part of the Lake Baikal region. Trudy VSEGEI 103:127-144 '64 (MIRA 17:8)

BOGDANOV, Yu.V.; GUR'YANOVA, V.N.; MIRAYYES, M.

Metallogenic outline of copper deposits in Cuba. Sov.geol.8 no.11:91-103 N '65. (MIRA 19:1)

BOGDANOV, Yu.V.; KOCHIN, G.G.; KUTYREV, E.I.; TRAVIN, L.V.; FEOKTISTOV, V.P.

Geology, characteristics of the distribution and conditions governing the formation of cuprous sandstones in the northeastern part of the Olekma-Vitim highland. Sov.geol. 8 no.11: 3-18 N '65. (MIRA 19:1)

ACC NR: AP7005436 SOURCE CODE: UR/0382/66/000/002/0130/0134

BOGDANOV, Yu. V.; BRANOVER, G. G.; LIYELAUSIS, O. A.; LIYELPETER, YA. YA.; and TANAYEV, A. V.

ORG: none

"Hydraulic Properties of Electromagnetic Pump Ducts; I"

Riga, Magnitnaya Gidrodinamika. (Magnetohydrodynamics), No. 2, 1966, pp 130-134

TOPIC TAGS: electromagnetic pump, friction coefficient, hydraulic resistance

Abstract: The flow pattern is studied and the coefficients of hydraulic friction of electromagnetic pump duct models are determined neglecting the effect of the magnetic field. The effect of the shape of the convergent and divergent parts of the electromagnetic pump duct on the coefficient of friction is estimated. The duct model investigated consists of a rectangular section with circular inlet and outlet sections tapering down to the rectangular duct.

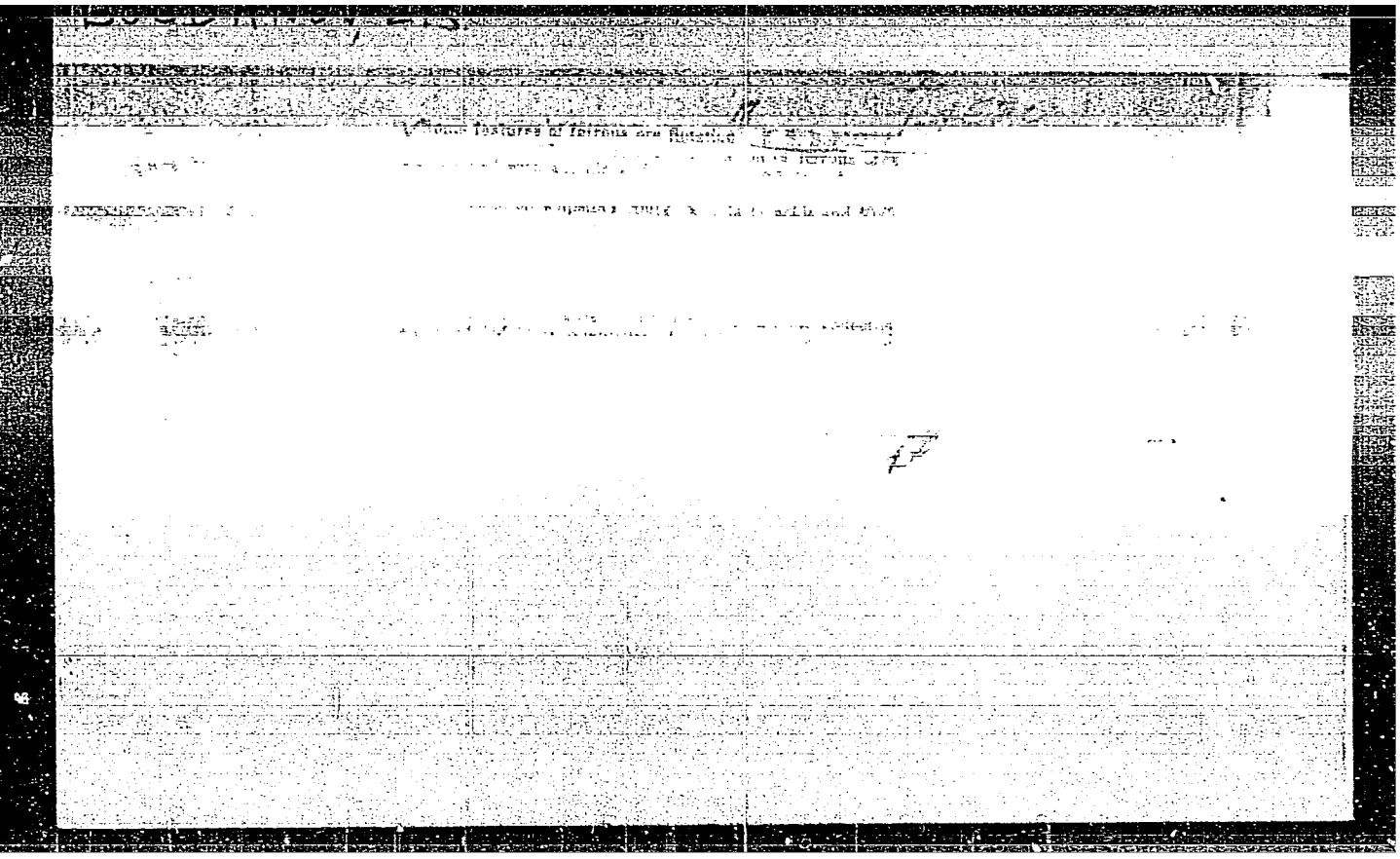
Details of the experimental configuration and equipment are given. Results of measurements are presented in a table. Results of the flow pattern study will be presented in a future paper. The studies were carried out at the Hydroelectric and Hydroengineering Laboratory of the Kalinin-Leningrad Polytechnical Institute. Orig. art. has: 5 figures and 1 table. [JPRS: 38,764]

SUB CODE: 20 / SUBM DATE: 13Feb66

Card 1/1 UDC: 532.542.4:538.4

BOGDANOV, Z., prof. inv. mediu (Bucuresti)

Development of reasoning in the classes 8-11 by studying geometry.
Gaz mat fiz 14 nc. 3:141-151. Mr '62



BOGDANOV — BEREZOVSKIY, V.V.

ANDRIYASHEVA, N.M.; BAKKAL, T.P.; BEKKER, S.M.; BOGDANOV-BEREZOVSKIY, V.V.; BRAUN, A.D.; VASILEVSKAYA, N.L.; GANUSENKO, M.N.; GARMASHEVA, N.L.; DEMICHEV, I.P.; DRIZGALOVICH, S.Ye.; KALININA, N.A.; KORSAKOVA, G.F.; KHYZHANOVSKAYA, Ye.F.; MIROVICH, N.I.; PROROKOVA, V.K.; PUGOVISHNIKOVA, M.A.; RESHETOVA, L.A.; SVETLOV, P.G.; UTEGENOVA, K.D.; KHECHINASHVILI, G.G.; SHVANG, L.I.; GARMASHEVA, N.L., professor, redaktor; RUDAKOV, A.V., redaktor; RULEVA, M.S., tekhnicheskiy redaktor.

[Reflex actions in mother-fetus interrelations] Reflektornye reaktsii vo vzaimootnosheniiakh materinskogo organizma i ploda. [Leningrad] Gos. izd-vo med. lit-ry, Leningradskoe otd-nie, 1954. 266 p.(MLRA 7:10)
(Pregnancy) (Embryology)

BOGDANOV-CHERRIN, A. M.

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 23 - X
[Supersedes AID 23-I]

Call No.: AF642837

BOOK
Author: BOGDANOV-CHERRIN, A. M.
Full Title: MECHANICS IN AERONAUTICAL ENGINEERING
Transliterated Title: Mekhanika v aviatsionnoy tekhnike
PUBLISHING DATA
Originating Agency: None
Publishing House: State Publishing House of the Defense Industry (Oborongiz)
Date: 1952 No. pp.: 444 No. of copies: Not given
Editorial Staff
Editor: Baykov, V. T., Dotsent
The author expresses gratitude for valuable help to Profs. Kosmolem'yanskiy, A. A. and Sveshnikov, G. N.
PURPOSE AND EVALUATION: This book is intended for practical aviation engineers, technicians and mechanics with high school education. The book may also be useful to more advanced readers who want to refresh their memory or find an explanation of basic or important principles of theoretical mechanics without complicated mathematical presentation. This is a good elementary textbook. The theoretical explanations are simple and easy to follow. The book contains 157 explanations of practical application of theoretical formulae. Its value is exclusively instructional.

1/3

Mekhanika v aviatsionnoy tekhnike AID 23 - X

TEXT DATA

Coverage: The book is divided into three parts: Statics, kinetics and dynamics. It contains numerous examples from the field of aircraft engineering. Analytical considerations are based on elementary mathematics. In some instances, such as the study of actual movements of aircraft or of some engine parts, the approximation of uniformity of movement has been adopted. This approximation simplifies but at the same time restricts the problems under consideration.

Table of Contents

Mekhanika v aviatsionnoy tekhnike AID 23 - X

No. of References: Total 27, 24 Russian 1930-1947; 3 other 1931-1948.
Facilities: None

24(6) PHASE I BOOK EXPLOITATION SOV/1353

Bogdanov-Cherrin, Aleksandr Mitrofanovich

Teoreticheskaya mekhanika (Theoretical Mechanics) Moscow, Voyen. izd-vo M-va obor. SSSR, 1958. 315 p. No. of copies printed not given.

Ed.: Zakharov, D.M., Engineer-Lt. Colonel; Tech. Ed.: Sleptsova, Ye.N.

PURPOSE: This book is intended for students at aeronautical-engineering schools of the Air Forces. It may also be useful to students of theoretical mechanics at intermediate technical schools, teachers of theoretical mechanics at tekhnikums and technical schools, and specialists interested in self-instruction in theoretical mechanics. The book is approved by the Chief of Administration of Military Training Institutes of the Air Forces as a textbook on theoretical mechanics.

Card 1/11

Theoretical Mechanics SOV/1353

COVERAGE: This book is an elementary treatment of rigid-body mechanics. It covers the subject matter included in statics, kinematics, and dynamics. The theoretical material in the book is illustrated by examples from aeronautical practice and by a large number of figures and diagrams. There are 231 figures and 16 references. The references are divided into three groups: History of philosophy (6 references, 4 of which are Soviet, 2 German), Mechanics (6 references, all Soviet), and Special Problems (4 references, all Soviet).

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Theoretical Mechanics SOV/1353

AVAILABLE: Library of Congress

IS/mtl
3-20-59

Card 11/11

BOGDANOV-KARPOV, N.N., FAL'KENSHTEYN, B. Yu., CHIGAREV, G. A., BEY-BIENKO, G. Ya. And SHCHEGLOV, V. N.

"Agricultural Entomology," Ogiz-Sel'khozizdat, Moscow-Lenningrad, 1949

BATIASHVILI, I.D.; BEY-BIYENKO, G.Ya.; BOGDANOV-KAT'KOV, N.N.; GERASIMOV, B.A.; GILYAROV, M.S.; DMITRIYEV, G.V.; ZVEREZOMB-ZUBOVSKIY, Ye.V.; ZIMIN, L.S.; KOLOBOVA, A.N.; MEDVEDEV, S.I.; MISHCHENKO, A.I.; PETROV, A.I.; RYABOV, M.A.; SAVZDARG, E.E.; SELIVANOVA, S.N.; SKORIKOVA, O.A.; TROPKINA, M.F.; SHAPOSHNIKOV, G.Kh.; SHCHEGOLEV, V.N., prof., doktor sel'skokhoz.nauk; ESTERBERG, L.K.; YAKHONTOV, V.V.; REUTSKAYA, O.Ye., red.; CHUMAYEVA, Z.V., tekhn.red.

[Classification of insects on the basis of damage to crops] Opredelitel' nasekomykh po povrezhdeniiam kul'turnykh rastenii. Izd.4, perer. i dop. Leningrad, Gos.izd-vo sel'khoz.lit-ry, 1960. 607 p. (MIRA 14:1)

(Insects, Injurious and beneficial)

BOGDANOVA, A. (Moskva)

The club works without ticket collectors. Sov. profsoiuzy 16 no.22:51 N '60. (MIRA 14:1)
(Moscow--Community centers)

KOCHETOVA, L.T.; BOGDANOVA, A.A.

New canned fruits as food for children. Kons.i ov.prom. 16 no.1: 11-12 Ja '61. (MIRA 13:12)

1. Krasnodarskiy nauchno-issledovatel'skiy institut pishchevoy promyshlennosti.
(Fruit—Preservation)

BOGDANOVA, A. A.

USSR.

Reaction of alkylacetoxysilanes with alcohols. K. A. Andrianov, A. A. Zhdanov, and A. A. Bogdanova. *Doklady Akad. Nauk S.S.S.R.* 94, 69 (1954). Heating 224 g. $MeSiCl_3$ and 460 g. Ac_2O with slow distn. (vapor temp. 50–5°) of the AcCl gave 78% $MeSi(OAc)_3$, m. 40.5°, b_{11} 110–12°, d_{20} 1.1750, n_D^{20} 1.4083. This (440 g.) treated slowly with 148 g. BuOH gave an exothermic reaction and after stirring 1 hr. the mixt. yielded several fractions, among them AcOH and 320 g. (63%) $MeSi(OBu)(OAc)_2$, b_4 93–6°, d_{20} 1.0200, n_D^{20} 1.4057. $MeSi(OAc)_3$ (220 g.) and 148 g. BuOH gave 28% $MeSi(OBu)_2OAc$, b_{10} 101–9°, d_{20} 0.9439, n_D^{20} 1.4037. G. M. Kosolapoff

[illegible] $[MeSi(OCH_2)_3]_x$, $b_{2.5}$ 35-190° (crude), which solidified on cooling, and whose suggested structure is $MeSi(OCH_2CH_2O)_3SiMe$. To 60[illegible].5 g. $ClCH_2CH_2OH$ and 8.5 g. Cu_2Cl_2 at 110-15° was added 378 g. $CH_2:MeCO_2Na$ and 8.5 g. Cu_2Cl_2 which gave after 6-7 hrs. at 120° a range of products including an unstated yield of *ethylene monomethacrylate*, b_{8} 90-103°. This with $MeSi(OAc)_3$ treated as above gave among other products an unstated yield of readily polymerizable $MeSi(OAc)_2OCH_2CH_2O_2CCMe:CH_2$, $b_{1.5}$ 133-4°, 1.1516, 1.4335.

G. M. Kosolapoff

15.8170

25214

S/062/61/000/007/004/009
B117/B215

AUTHOR: Zhdanov, A. A., Andrianov, K. A., and Bogdanova, A. A.

TITLE: Reaction of aluminum chloride with dialkyl cyclosiloxanes

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 7, 1961, 1261 - 1266

TEXT: The interaction of aluminum chloride with dimethyl- and diethyl cyclosiloxanes was investigated in a study of the methods of producing polyalumo-organosiloxanes. A flask with mixer, thermometer, recooler, and cooling vessels for collecting the reaction products were used for the experiments. It was found that aluminum chloride reacts easily with dimethyl- and diethyl cyclosiloxanes at equimolecular ratios. Crystalline reaction products are formed which are quantitatively sublimated in vacuo. In the examination of the reaction mixture obtained by reaction between octamethyl cyclotetrasiloxane and aluminum chloride (mixing time: 10 hr at 120°C), the following reaction products were isolated: 1,3-dichloro tetramethyl disiloxane, boiling point: 32° - 36°C (10 mm); 1,5-dichloro hexamethyl trisiloxane, boiling point: 72° - 75°C (10 mm); 1,7-dichloro octamethyl tetrasiloxane, boiling point: 90° - 95°C (10 mm); a

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S/062/61/000/007/004/009
B117/B215

Reaction of aluminum chloride ...

crystalline substance, boiling point: 152° - 153°C, of the empirical composition $C_8H_{24}O_6Cl_5Si_4Al_3$. The formation of these products in the reaction mixture followed the scheme

$$2\left[(CH_3)_2SiO\right]_4 + 3AlCl_3 \rightarrow C_8H_{24}O_6Cl_5Si_4Al_3 + 2C_4H_{12}Si_2CCl_2$$

The crystalline substance of the above empirical formula showed a constant composition in repeated sublimation. On the basis of analytical data and chemical studies it may be assumed that the respective substance contains a complex aluminum chloride molecule. The reaction between aluminum chloride and hexamethyl cyclotrisiloxane (mixing time: 6 hr at 50° - 60°C) is similar to the previous one, with the only difference that besides the crystalline substance also dimethyl dichlorosilane and highest α,ω - dichloro polysiloxanes are formed. This process may be expressed by the scheme $2\left[(CH_3)_2SiO\right]_3 + 3AlCl_3 - C_8H_{24}O_6Cl_5Si_4Al_3 + 2C_2H_6SiCl_2$.

Similar ethyl derivatives were isolated in the reaction between aluminum chloride and octaethyl cyclotetrasiloxane (mixing time: 11 hr at 120°C)

1,3-dichloro tetraethyl disiloxane, boiling point: 85° - 90°C (10 mm); 1,5 dichloro hexaethyl trisiloxane, boiling point: 124° - 131°C (10 mm); 1,4-dichloro octaethyl tetrasiloxane, boiling point: 131°C - 145°C (10 mm); a crystalline substance which is sublimated at 225°C - 233°C, melting point: 112°C (unstable), of the empirical composition $C_{16}H_{40}O_6Cl_5Si_4Al_3$. The structures of the crystalline substances are similar in both cases. An identical, crystalline substance of the above composition and highest polydiethyl siloxanes were obtained in the reaction between aluminum chloride and hexaethyl cyclotrisiloxane (mixing time: 5 hr at 80°C). Conclusion: Rupture of the cycle takes place in the interaction of aluminum chloride and the above cyclic dialkyl siloxanes, and α-chloro-ω-dichloro alumoxydialkyl polysiloxanes are formed. The latter then separate α,ω-dichloro polysiloxanes and form cyclic compounds: 1-chloro-3,3,5,5-tetramethyl cycloalumodisiloxane and 1-chloro-3,3,5,5-tetraethyl cycloalumodisiloxane. These compounds were isolated and characterized in the form of complexes with aluminum chloride. There is 1 non-Soviet-bloc reference.

25214 S/062/61/000/007/004/009
Reaction of aluminum chloride ... B117/B215

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Adademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: September 26, 1960

Card 4/4

ALEKSANDROVA, V.I., kand. ist. nauk, starshiy nauchnyy sotr.; PETRASH, V.V., starshiy nauchnyy sotr.; BOGDANOVA, A.A., starshiy nauchnyy sotr.; LIVSHITS, I.A., starshiy nauchnyy sotr.; NIKUL'CHENKOV, K.I., polkovnik, red. [deceased]; SOLOV'YEV, N.I., red.; SOKOLOVA, G.F., tekhn. red.

[M.P.Lazarev; documents] M.P.Lazarev; dokumenty. Pod red. K.I.Nikul'chenkova. Moskva, Voen. izd-vo M-va obor. SSSR. (Russkie flotovodtsy). Vol.3. 1961. 576 p. (MIRA 15:2)

1. Russia (1923- U.S.S.R.) TSentral'nyy gosudarstvennyy arkhiv Voyenno-Morskogo Flota. 2. TSentral'nyy gosudarstvennyy arkhiv Voyenno-Morskogo Flota SSSR (for Aleksandrova, Petrash, Bogdanova).
(Lazarev, Mikhail Petrovich, 1788-1851)

ZHDANOV, A.A.; ANDRIANOV, K.A.; BOGDANOVA, A.A.

Reaction of aluminum chloride with dialkylcyclosiloxanes.
Izv. AN SSSR. Otd.khim.nauk no.7:1261-1266 Jl '61. (MIRA 14:7)

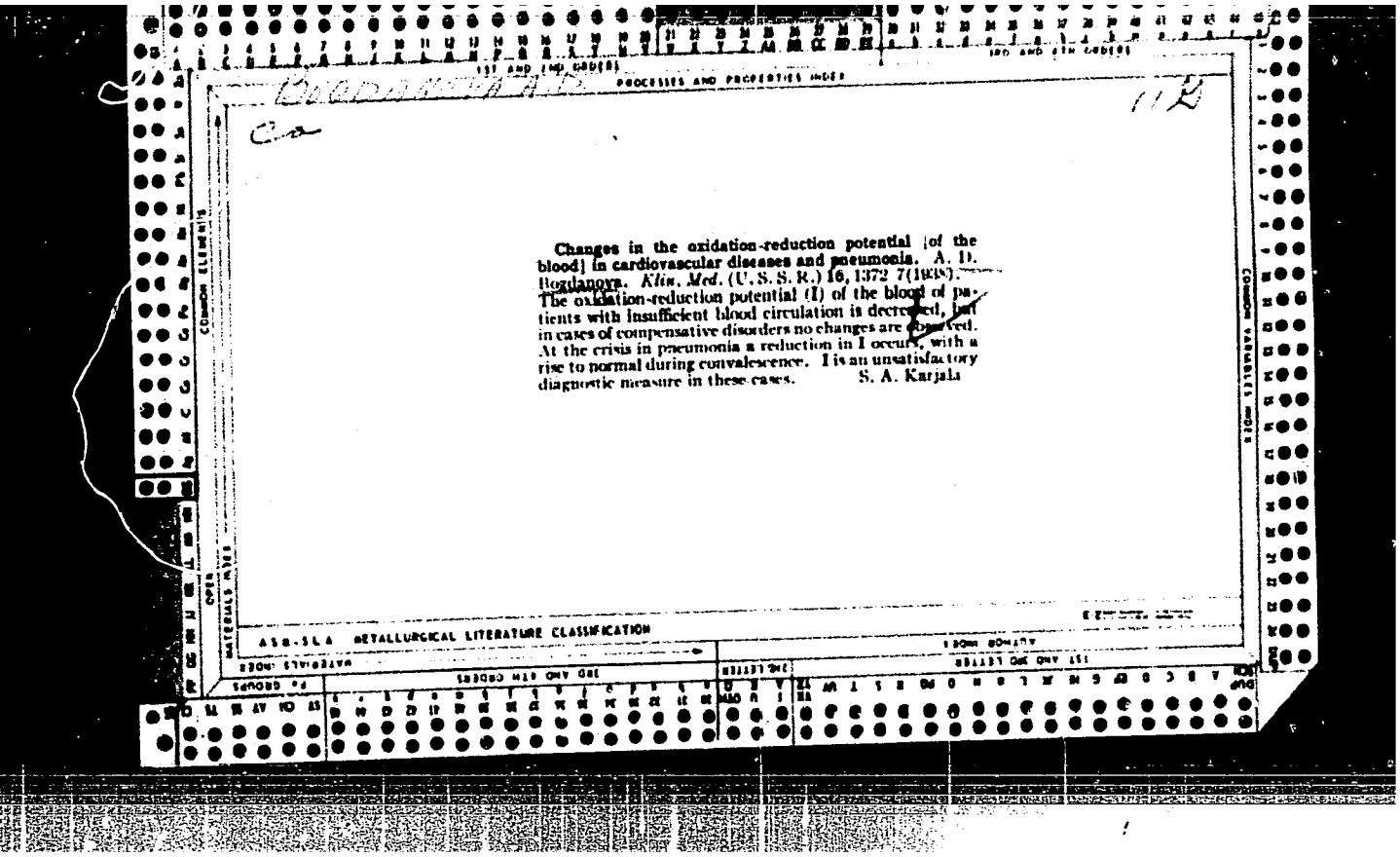
1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Aluminum chloride) (Cyclosiloxane)

BOGDANOVA, Anna Aleksandrovna; DOROSHKEVICH, Nina Orestovna; ZLOCHEVSKAYA, Khioniya Yefimovna; SAPUNOV, O.K., red.; TIKHONOVA, Ye.A., tekhn. red.

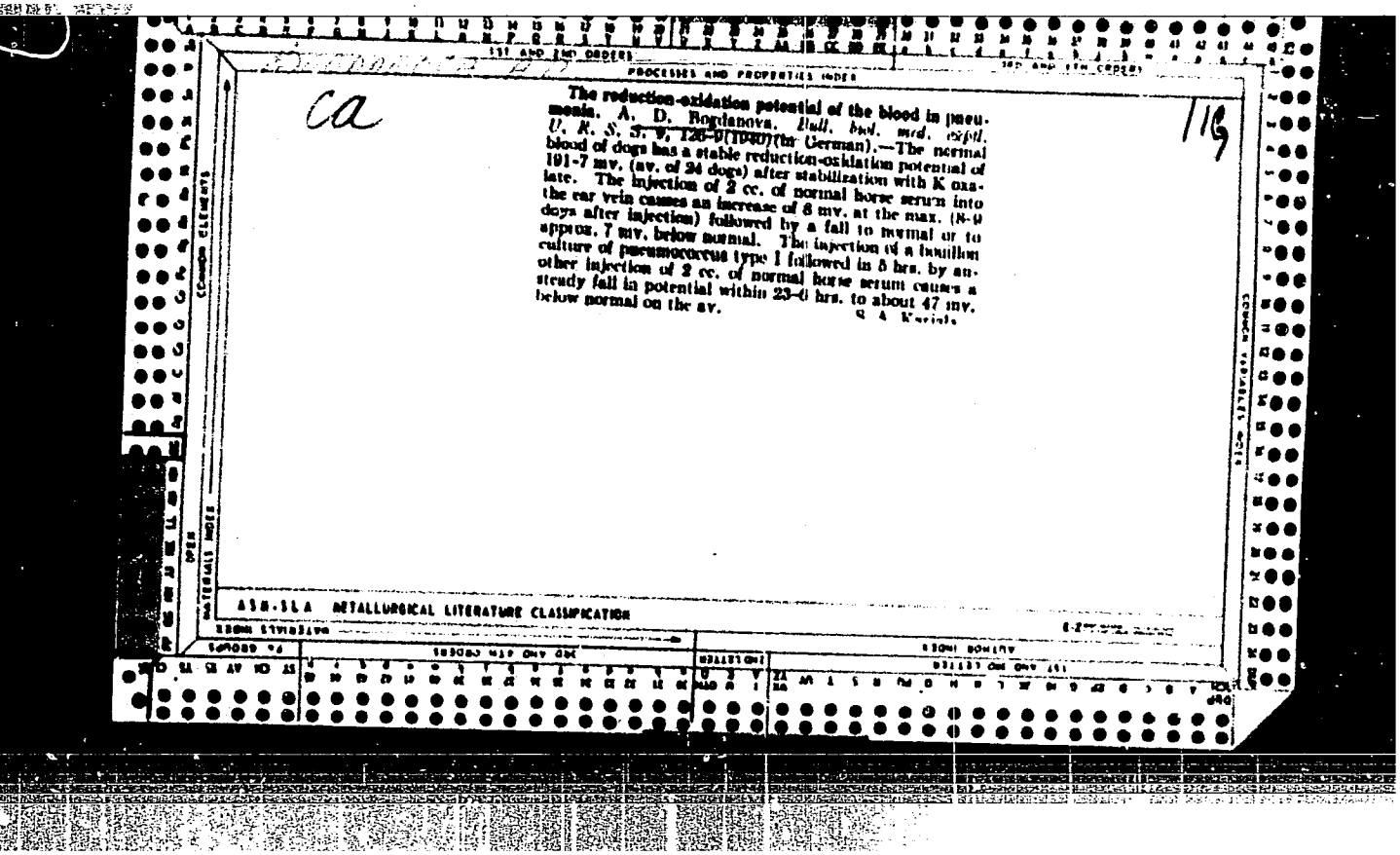
[English language for marine electricians] Angliiskii iazyk dlia sudovykh elektromekhanikov. Moskva, Izd-vo "Morskoi transport," 1962. 167 p. (MIRA 16:4)
(Electricity on ships)
(English language--Technical english)

ZONENSHAIN, Lev Pavlovich; BOGDANOVA, A.A., red.; BASHMAKOVA, Z.I., red.izd-va; BYKOVA, V.V., tekhn. red.

[Tectonics of the Western Sayan Mountains] Tektonika Zapadnogo Saiana. Pod red.A.A.Bogdanova. Moskva, Gosgeoltekhizdat, 1963. 110 p. (MIRA 16:10)
(Sayan Mountains--Geology, Structural)



Changes in the oxidation-reduction potential [of the blood] in cardiovascular diseases and pneumonia. A. D. Bogdanova. *Klin. Med.* (U.S.S.R.) 16, 1372 7(1938). The oxidation-reduction potential (I) of the blood of patients with insufficient blood circulation is decreased, but in cases of compensative disorders no changes are observed. At the crisis in pneumonia a reduction in I occurs, with a rise to normal during convalescence. I is an unsatisfactory diagnostic measure in these cases. S. A. Karjala



ca

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The reduction-oxidation potential of the blood in pneumonia. A. D. Bogdanova. *Bull. biol. med. exptl. U. R. S. S.* 9, 125-9(1940)(in German).—The normal blood of dogs has a stable reduction-oxidation potential of 191-7 mv. (av. of 24 dogs) after stabilization with K oxalate. The injection of 2 cc. of normal horse serum into the ear vein causes an increase of 8 mv. at the max. (8-9 days after injection) followed by a fall to normal or to approx. 7 mv. below normal. The injection of a bouillon culture of pneumococcus type I followed in 5 hrs. by another injection of 2 cc. of normal horse serum causes a steady fall in potential within 23-6 hrs. to about 47 mv. below normal on the av.

S. A. Waksman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BOGDANOVA, A.D., kand;med.nauk; VVEDENSKAYA, M.V., kand.med.nauk

Case of thromboangiitis obliterans with multiple lesions of the large and small vessels and a syndrome of liver lesions. Sov. med. 25 no.7:141-143 Jl '61. (MIRA 15:1)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. A.I.Gefter) Gor'kovskogo meditsinskogo instituta.
(BLOOD VESSELS--DISEASES) (LIVER--DISEASES)

SOV/126-6-3-22/32

AUTHORS: Palatnik, L. S., Levchenko, A. A., Bogdanova, A.F. and Terletskiy, V. Ye.

TITLE: Determination of the Type of Equilibrium Phase Diagram for Cu-Ni at High Temperatures by Spectral Analysis. II. (Opredeleniye tipa diagrammy ravnovesiya Cu-Ni v oblasti vysokikh temperatur metodom spektral'nogo analiza. II)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 3, pp 540-544 (USSR)

ABSTRACT: Palatnik's spectral method (Ref 1) is applied to systems consisting of liquid plus vapour; the method utilises the fact that the selective evaporation (or retention) of a component is dependent on the type of interaction (i.e. ultimately the type of euilibrium diagram). Spark discharges are passed through the vapour, using as solid electrode a sample of the alloy; the surface of the electrode becomes depleted by selective evaporation (solid-state diffusion negligible). The main application is to binary systems, in which only three types of diagram exist, and where the type of diagram can therefore be readily established (from the deviations from Raoult's

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Determination of the Type of Equilibrium Phase Diagram for Cu-Ni at High Temperatures by Spectral Analysis. II.

law on varying the composition). The Cu-Ni alloys used were prepared by sintering the pressed powders in hydrogen at 950°C for one hour. The Cu was electrolytic; the Ni was prepared from nickel oxalate by hydrogen reduction. Fifteen alloys were used. Spark lines of Cu II and Ni II were used as reference lines; the wavelengths are given in Table 2. Fig. 2 shows how the experimental curve (top) compares with the liquid-vapour (middle) and solid-liquid (bottom) equilibrium curves. It is pointed out that the middle curves are really only deduced from the experimental spark curves, and are only very approximately correct. The tendency to selective evaporation, although slight, indicates that a narrow two-phase region may exist in the liquid. There are 2 tables, 3 figures and 2 references, one of which is a Soviet original and the other a translation of a work by Hansen.

SOV/126-6-3-22/32

Determination of the Type of Equilibrium Phase Diagram for Cu-Ni at High Temperatures by Spectral Analysis. II.

ASSOCIATIONS: Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy) and Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina (Khar'kov Polytechnical Institute imeni V. I. Lenin)

SUBMITTED: September 15, 1956

1. Copper-nickel alloys--Analysis 2. Copper-nickel alloys--Sintering
3. Copper-nickel alloys--Phase studies 4. Hydrogen--Applications

Card 3/3

BOGDANOVA, A. G.

Chem (3)

Newsletter Sci. Abs. V-8 Jan 15, 1954 Physics

THE INFLUENCE OF FREE CARBON IN THE BINDER ON THE QUALITY OF ELECTRICAL CARBON OR ELECTRODE PARTS. V. N. Krylov, A. S. Polubelova, and A. G. Bogdanova. Translated from Zhur. Priklad. Khim. 23, 365-9(1950). 5p. (AERE-Trans-11/3/5/348)

1-29-54

NUGMANOV, S.N., dotsent; BOGDANOVA, A.G.

Diagnostic value of the test of the cytomorphology of the vaginal secretion in treatment of ovarian-menstrual disorders. Zdrav. Kazakh. 21 no. 3:28-32 '61. (MIRA 14:4)

1. Iz kafedry akusherstva-ginekologii fakul'teta usovershenstvovaniya vrachey (zav. - dotsent T.A. Koryakina) Kazakhskogo meditsinskogo instituta.

(OVARIES--DISEASES) (VAGINA)

BOGDANOVA, A.K.

Method for regular observations on near-shore currents at coastal hydrometeorological stations. Biul.Okean kom. no.3: 57-68 '59. (MIRA 13:4)
(Ocean currents)

3 (9)

AUTHORS: Bogdanova, A. K., Kropachev, L. M. SOV/50-59- -4/21

TITLE: **Off-shore and On-shore Wind Tide and Its Importance** for the Hydrological Conditions of the Black Sea (Sgonno-nagonnaya tsirkulyatsiya i yeye rol' v gidrologicheskom rezhime Chernogo morya)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 4, pp 26-33 (USSR)

ABSTRACT: **The off-shore and on-shore wind tides** of the **water on the coasts** express themselves clearly by the intense level variations in shoal-water bays, or by the rapid fall of water temperature on steep shores. The first steps in setting up the theory of wind-tide and wind-backtide phenomena (sgonno-nagonnoye yavleniye) were made by Ekman. Later on, this theory was further developed by V. V. Shuleykin. - On the Black-Sea coast of the USSR, wind tides are observed at winds in the western half of the horizon. The south winds cause drift currents and wind tides, particularly in the western half of the Black Sea, whereas the west winds cause the propagation of wind tides along the whole north shore. The authors have often observed wind tides and wind backtides on the whole coast from Odessa to Batumi. They give here the

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observations of August 1947 and June 1949. These observations prove the simultaneous propagation of the backtides along the whole Black-Sea coast with the formation of eddies of current with an anticyclonic rational system, but at the same time point out the great stability and life of the same. The longest backtides are found at the end of spring when the branch of the Siberian anticyclone slackens and moves towards the east, while the Mediterranean cyclones get a free outlet over the Black Sea to the south of the European part of the USSR. From 1936-40 and from 1946-56, between 2 and 4 extensive and long-lasting backtides were observed on an average each summer. The rules ascertained in the observations refer to small current rings. The small current eddies unsteady in time are accompanied by a transverse circulation and lead to a rapid redistribution of the water masses. The more intense the cyclonic current is, the higher rise the stable layers of the thermocline and of the halocline in the rotational center. A rise of the density boundary surface, a reduction of its thickness, and an increase in the density gradient in the layer are usually observed in the wind backtide areas.

And vice versa, a decrease of the thermocline and of the cold intermediate layer with a simultaneous increase in the thickness of these layers and a decrease of the temperature gradient and of the salt content in the same, are generally found in the centers of anticyclonic currents, in the wind-tide areas. - The rise and fall of the water on the coasts and in the centers of the cyclonic and anticyclonic current eddies during the time of evolution of the wind-tide and wind-backtide currents and at the moment of the current change belong to the most important factors of the vertical exchange of water in the upper 150-200 m layer of the Black Sea. The deep waters rise to the surface, are heated by the sun and desalted by the afflux of fresh water from the rivers, thus decreasing in density, and not being able to sink down to their former depth after the end of the backtide. Deeper layers rise in the following wind backtides. In winter, this deep water reaching the surface is intensely cooled, becomes denser and sinks down to a deeper horizon (than it had risen from) after the end of the wind backtide. This explains why in the central and south-east parts of the Black Sea the water temperature

Off-shore and On-shore Wind Tide and Its SOV/50-59-4-4/21
Importance for the Hydrological Conditions of the Black Sea

in the depth of the cold intermediate layer is often lower than the lowest temperature on the surface of the sea in winter. There are 3 figures and 18 Soviet references.

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BOGDANOVA, A.K.

Rise and flow circulation and thermal conditions of the Black Sea. Trudy SBS 11:262-283 '59. (MIRA 13:5)
(Black Sea--Temperature)

BOGDANOVA, A.K.

Vertical distribution of oxygen in the Black Sea. Trudy SBS 11:297-315 '59. (MIRA 13:5)
(Black Sea--Water--Oxygen content)

BOGDANOVA, A.K.

Rise and flow circulation and its role in enriching the surface waters of the Black Sea with nutrient salts. Trudy SBS 11: 335-352 '59. (MIRA 13:5)
(Black Sea--Hydrology)

BOGDANOVA, A.K.

Water exchange through the Bosporus and its role in the mixing of waters of the Black Sea. Trudy SBS 12:401-420 '59. (MIRA 14:10)
(BOSPORUS--OCEAN CURRENTS) (BLACK SEA--HYDROLOGY)

BOGDANOVA, A.K.

Rise and flow currents in the coastal zone near a relatively straight steep-to shore. Trudy SBS 12:421-455 '59. (MIRA 14:10)
(BLACK SEA—OCEAN CURRENTS) (WINDS)

KROPACHEV, L.N.; BOGDANOVA, A.K.

Level fluctuations of the Sea of Azov. Meteor. i gidrol. no.10: 19-26 O '60. (MIRA 13:10)
(Azov, Sea of--Hydrology)

BOGDANOVA, A.K.

Recent data on the distribution of Mediterranean waters in the Black Sea. Trudy SBS 13:379-385 '60. (MIRA 14:3)
(Black Sea--Hydrology)

BOGDANOVA, A.K.

Long-range fluctuations of the sea level and the amount of continental runoff as factors determining changes in the hydrological regime of the Black Sea. Trudy SBS 13:386-393 '60. (MIRA 14:3)
(Black Sea--Hydrology)

BOGDANOVA, A.K.

Vertical mixing of waters in the Black Sea. Mezhdumar.geofiz.god no.3:117-125 '61. (MIRA 14:10)

1. Sevastopol Biological Station of the Academy of Sciences of the U.S.S.R.

(Black Sea--Hydrology)

BOGDANOVA, A.K.

Preliminary results of hydrological explorations in the Mediterranean Sea made by the research ship "Akademik Kovalevskii" in 1958-59. Trudy SBS 14:334-345 '61. (MIRA 15:4)
(Mediterranean Sea--Hydrology)